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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/771,331

02/05/2004

Orlaw Massler

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CROWELL & MORING LLP  
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EXAMINER

STOUFFER, KELLY M

ART UNIT

PAPER NUMBER

1762

MAIL DATE

DELIVERY MODE

08/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/771,331

Applicant(s)

MASSLER ET AL.

Examiner

Kelly Stouffer

Art Unit

1762

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 03 August 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 43-50, 52-59 and 61.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See attached Detailed Action.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_  
13. ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 3 August 2007 have been fully considered but they are not persuasive. The applicant argues that Ong et al. does not teach a process vacuum of less than  $10^{-4}$  or  $10^{-5}$  mbar. However, Ong et al. teaches, in column 6 lines 15-35 that the process pressure may vary depending on film requirements, for example, film quality and deposition area size. Therefore, it would be obvious to modify the variable of process pressure to the claimed range by routine experimentation to achieve desired film quality and area and to modify variables such as film growth kinetics and growth at lower substrate temperature (Ong et al. column 6 lines 15-35).

The applicant argues that Neerinck et al. does not include a cleaning step "where volatiles are removed from the surface, for example, by igniting a noble gas plasma" (Applicants' arguments, page 3). However, it is noted that these features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore, as the claim is written, Neerinck et al. reads upon a cleaning step, as the etching step performed in Neerinck et al. cleans oxide residue from the substrate surface before film deposition.

The applicant argues that the frequency ranges given in Hashimoto et al. column 13 lines 8-48 are not applicable to the present invention. However, Hashimoto et al. gives frequencies for substrate bias voltage that directly affect plasma density. One of

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ordinary skill in the art would recognize that plasma density, along with the presence of defects due to plasma density and substrate bias voltage, would be applicable to any type of plasma film processing whether it be deposition or etching. One of ordinary skill in the art would additionally recognize that when plasma is used the incidence of excited electrons during a coating operation also etches a film as well as deposits a film albeit at different respective speeds.

Further, the applicant argues that Ong et al. does not teach the application of a transition layer to the adhesion layer as required by 43(d). The applicant states that there is no recitation of simultaneous depositing of the adhesion layer and carbon in Ong et al. It is noted that this feature upon which applicant relies is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore, as the claim is written, Ong et al. indeed reads upon depositing an adhesion layer and transition layer as was cited in the previous office action.

The applicant argues that the examiner uses impermissible hindsight when combining Ichimura et al. However, on page 6 (second full paragraph) and page 7 (first full paragraph) of the previous office action, citations from Ichimura et al. for combining the features of Ichimura et al. with the other references are given and were not taken from the instant specification. In the abstract of Ichimura et al. the magnetic field is indeed varied due to microwaves used during the process. It is also noted by the

examiner that a magnetic field, being a wave, inherently varies continuously with respect to frequency and wavelength, at least as broadly as it is described in the claims.

Therefore, for at least these above reasons, the rejections of the previous office action are maintained.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly Stouffer whose telephone number is (571) 272-2668. The examiner can normally be reached on Monday - Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

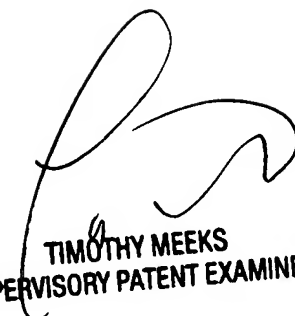
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Kelly Stouffer  
Examiner  
Art Unit 1762

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**TIMOTHY MEEKS**  
**SUPERVISORY PATENT EXAMINER**